

WHAT IS CLAIMED IS:

1. A directional coupler comprising:

a main line through which a high-frequency signal is transmitted; and

a subline provided on a common plane with said main line, the subline being electromagnetically coupled to said main line along a portion where said main line and said subline oppose each other, wherein a self-inductance value of said main line is smaller than a self-inductance value of said subline.

2. A directional coupler according to Claim 1, further comprising a multilayered laminate body including insulating layers, wherein said main line and said subline are disposed on each layer of said multilayered laminated body with one of said insulating layers provided therebetween, and the main lines of each layer and the sublines of each layer are electrically connected to each other in series through via holes provided in said insulating layers.

3. A directional coupler according to Claim 1, wherein a line width of said subline is narrower than a line width of said main line.

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4. A directional coupler according to Claim 1, wherein an electrode thickness of said main line is about 5  $\mu\text{m}$  or more, and a ratio of the electrode thickness of said main line to that of said subline is about 2:1.

5. A directional coupler according to Claim 1, wherein a line width of said subline is about 50% to about 90% of a line width of said main line.

6. A directional coupler according to Claim 2, wherein said main line and said subline are made of a photosensitive conductive paste, and said insulating layers are made of a photosensitive glass paste.

7. A directional coupler according to Claim 1, further comprising a substrate having an upper major surface, wherein said main line and said subline are disposed on said upper major surface of said substrate.

8. A directional coupler according to Claim 7, wherein said substrate is made of at least one of glass, glass ceramics, alumina, ferrite, Si, and  $\text{SiO}_2$ .

9. A directional coupler according to Claim 1, wherein the directional coupler is one of a strip-line type coupler

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and a broadside-type coupler.

10. A directional coupler according to Claim 1, wherein the main line includes a main line conductor pattern and the subline includes a subline conductor pattern, and the subline conductor pattern extends substantially parallel with and outside of the main line conductor pattern.

11. A directional coupler comprising:

a main line through which a high-frequency signal is transmitted; and

a subline that is electromagnetically coupled to said main line along a portion where the main line and the subline oppose each other, wherein a line width of said subline is narrower than a line width of said main line, and a self-inductance value of said main line is smaller than a self-inductance value of said subline.

12. A directional coupler according to Claim 11, wherein a grounding electrode opposes at least one of said main line and said subline and an insulating layer is provided therebetween.

13. A directional coupler according to Claim 12, wherein said main line and said subline are made of a

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photosensitive conductive paste, and said insulating layer is made of a photosensitive glass paste.

14. A directional coupler according to Claim 11, further comprising a multilayered laminate body including insulating layers, wherein said main line and said subline are disposed on each layer of said multilayered laminated body with one of said insulating layers provided therebetween, and the main lines of each layer and the sublines of each layer are electrically connected to each other in series through via holes provided in said insulating layers.

15. A directional coupler according to Claim 11, wherein an electrode thickness of said main line is about 5  $\mu\text{m}$  or more, and a ratio of the electrode thickness of said main line to that of said subline is about 2:1.

16. A directional coupler according to Claim 11, wherein a line width of said subline is about 50% to about 90% of a line width of said main line.

17. A directional coupler according to Claim 11, further comprising a substrate having an upper major surface, wherein said main line and said subline are disposed on said

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upper major surface of said substrate.

18. A directional coupler according to Claim 17, wherein said substrate is made of at least one of glass, glass ceramics, alumina, ferrite, Si, and SiO<sub>2</sub>.

19. A directional coupler according to Claim 11, wherein the directional coupler is one of a strip-line type coupler and a broadside-type coupler.

20. A directional coupler according to Claim 11, wherein the main line includes a main line conductor pattern and the subline includes a subline conductor pattern, and the subline conductor pattern extends substantially parallel with and outside of the main line conductor pattern.

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